

WHAT IS CLAIMED IS:

1. An apparatus for transmitting a time-discontinuous burst pilot channel dependent on transmission data in a mobile communication system,
5 comprising:

a modulator for generating a modulated pilot symbol by outputting an input pilot channel data at at least one of a designated phase and on a designated complex channel according to an information bit for designating at least one of the phase and the complex channel; and

10 a spreader for spreading the modulated pilot symbol from the modulator with an orthogonal code selected among a plurality of orthogonal codes;

wherein the burst pilot channel transmits side information being dependent on the transmission data according to at least one of the phase, and the complex channel and the orthogonal code.

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2. The apparatus as claimed in claim 1, wherein the modulated pilot symbol has a length of 128 chips.

3. The apparatus as claimed in claim 1, wherein the modulated pilot
20 symbol has a length of 64 chips.

4. The apparatus as claimed in claim 1, wherein the complex channel includes an I channel and a Q channel.

25 5. An apparatus for transmitting side information over a burst pilot channel in a mobile communication system, comprising:

a modulator for generating a modulated pilot symbol by outputting an input pilot channel data at a designated phase according to an information bit for determining the phase; and

30 a spreader for spreading a modulated pilot symbol output from the

modulator with a predefined orthogonal code.

6. An apparatus for transmitting side information over a burst pilot channel in a mobile communication system, comprising:

5 a modulator for generating a modulated pilot symbol by outputting an input pilot channel data on a designated complex channel according to an information bit for determining the complex channel; and

a spreader for spreading a modulated pilot symbol output from the modulator with a predefined orthogonal code.

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7. An apparatus for transmitting side information over a burst pilot channel in a mobile communication system, comprising:

a modulator for generating a burst pilot symbol; and

15 a spreader for spreading the burst pilot symbol with an orthogonal code selected according to an information bit, from a plurality of orthogonal codes.

8. An apparatus for transmitting side information over a burst pilot channel in a mobile communication system, comprising:

20 a modulator for generating a modulated pilot symbol by outputting an input pilot channel data at a designated phase according to an information bit for designating the phase; and

a spreader for spreading the modulated pilot symbol with an orthogonal code selected according to the information bit, from a plurality of orthogonal codes.

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9. An apparatus for transmitting side information over a burst pilot channel in a mobile communication system, comprising:

a modulator for generating a modulated pilot symbol by outputting an input pilot channel data on a designated complex channel according to an information bit for determining the complex channel; and

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a spreader for spreading the modulated pilot symbol with an orthogonal code selected according to the information bit, from a plurality of orthogonal codes.

- 5 10. A method for transmitting a time-discontinuous burst pilot channel dependent on transmission data in a mobile communication system, comprising the steps of:

generating a modulated pilot symbol by outputting an input pilot symbol at at least one of a designated phase and on a designated complex channel
10 according to an information bit for determining at least one of the phase and the complex channel; and

spreading the modulated pilot symbol with an orthogonal code selected from a plurality of orthogonal codes;

wherein the burst pilot channel transmits side information being
15 dependent on the transmission data according to the phase, and/or the complex channel and the orthogonal code.

11. The method as claimed in claim 10, wherein the modulated pilot symbol has a length of 128 chips.

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12. The method as claimed in claim 10, wherein the modulated pilot symbol has a length of 64 chips.

13. The method as claimed in claim 10, wherein the complex
25 channel includes an I channel and a Q channel.

14. A method for transmitting side information over a burst pilot channel in a mobile communication system, comprising the steps of:

generating a modulated pilot symbol by outputting an input pilot symbol
30 at a designated phase according to an information bit for determining the phase;

and

spreading the generated modulated pilot symbol with a predefined orthogonal code.

- 5 15. A method for transmitting side information over a burst pilot channel in a mobile communication system, comprising the steps of:

generating a modulated pilot symbol by outputting an input pilot symbol on a designated complex channel according to an information bit for determining the complex channel; and

- 10 spreading the generated modulated pilot symbol with a predefined orthogonal code.

16. A method for transmitting side information over a burst pilot channel in a mobile communication system, comprising the steps of:

- 15 generating a pilot symbol; and

spreading the generated pilot symbol with an orthogonal code selected according to an information bit, from a plurality of orthogonal codes.

17. A method for transmitting side information over a burst pilot
20 channel in a mobile communication system, comprising the steps of:

generating a modulated pilot symbol by outputting an input pilot symbol at a designated phase according to an information bit for determining the phase; and

- 25 spreading the generated modulated pilot symbol with an orthogonal code selected according to the information bit input signal, from a plurality of orthogonal codes.

18. A method for transmitting side information over a burst pilot channel in a mobile communication system, comprising the steps of:

- 30 generating a modulated pilot symbol by outputting an input pilot symbol

on a designated complex channel according to an information bit for determining the complex channel; and

spreading the generated modulated pilot symbol with an orthogonal code selected according to the information bit, from a plurality of orthogonal codes.